

CLAIMS

What is claimed is:

1. A digital music conversion device for converting a digital music file in a first format into a digital music file in a second format, which comprises:

- 5 a first data transmission interface, which is connected to a digital music player via a data transmission wire, the digital music player is selectively loaded with a recording medium with the digital music file in the first format;
- 10 a format converting module, which is connected to the first data transmission interface for receiving the digital music file in the first format, and analyzing, decoding, and converting it into the digital music file in the second format so that the file in the second format occupies less storage space than the one in the first format; and
- 15 a second data transmission interface, which is connected to the format converting module and selectively to a portable recording medium that communicates with the second data transmission interface to store the digital music file in the second format in the portable recording medium.

2. The digital music conversion device of claim 1, wherein the format converting module further comprises:

- 20 a control module, which is coupled to the first data transmission interface and the second data transmission interface to receive and analyze the digital music file in the first format and to send the digital music file in the second format via the second data transmission interface to the portable recording medium for storage, respectively;
- a decoding module, which is coupled to the control module and stored with a

plurality of music formats for decoding the digital music file in the first format and converting it into the music file in the second format, the second format being one of the plurality of music formats; and

5 a buffer unit, which is coupled to the control module for assisting the operations of the control module and the decoding module.

3. The digital music conversion device of claim 1, wherein the format converting module further comprises a user interface (UI) with a plurality of operation keys and a display monitor, the operation keys enabling the user to control the device and the display monitor showing relevant messages during the operation process and the music format
10 converting process.

4. The digital music conversion device of claim 1, wherein the control module is a digital signal processing (DSP) chip.

5. The digital music conversion device of claim 1, wherein the first data transmission interface is one selected from the group consisting of a high-speed data transmission
15 interface, a PCMCIA interface, a universal serial bus (USB) interface, and an integrated device electronic (IDE) interface.

6. The digital music conversion device of claim 1, wherein the second data transmission interface is one selected from the group consisting of a high-speed data transmission interface, a PCMCIA interface, a universal serial bus (USB) interface, and an
20 integrated device electronic (IDE) interface.

7. The digital music conversion device of claim 1, wherein the portable recording medium is one selected from the group consisting of a PCMCIA memory card and a flash memory card.

8. A digital music conversion device for converting a digital music file in a first
25 format into a digital music file in a second format, which comprises:

a digital music player, which is selectively loaded with a recording medium containing digital music files in the first format; and

5 a format converting module, which is connected to the digital music player via a first data transmission interface for receiving a digital music file in the first format, and analyzing, decoding, and converting it into the digital music file in the second format so that the file in the second format occupies less storage space than the one in the first format;

10 wherein the format converting module is connected to a second data transmission interface, which is selectively connected to a portable recording medium that communicates with the second data transmission interface for storing the digital music file in the second format.

9. The digital music conversion device of claim 8, wherein the format converting module further comprises:

15 a control module, which is coupled to the first data transmission interface and the second data transmission interface to receive and analyze the digital music file in the first format and to send the digital music file in the second format via the second data transmission interface to the portable recording medium for storage, respectively;

20 a decoding module, which is coupled to the control module and stored with a plurality of music formats for decoding the digital music file in the first format and converting it into the music file in the second format, the second format being one of the plurality of music formats; and

a buffer unit, which is coupled to the control module for assisting the operations of the control module and the decoding module.

25 10. The digital music conversion device of claim 8, wherein the format converting

module further contains a user interface (UI) with a plurality of operational keys and a display screen, the operational keys enabling the user to control and the display monitor showing relevant messages during operations/music format conversion processes.

11. The digital music conversion device of claim 8, wherein the control module is a
5 digital signal processing (DSP) chip.

12. The digital music conversion device of claim 8, wherein the first data transmission interface is a high-speed data transmission interface.

13. The digital music conversion device of claim 12, wherein the first data transmission interface is a PCMCIA interface.

10 14. The digital music conversion device of claim 12, wherein the first data transmission interface is a universal serial bus (USB) interface.

15. The digital music conversion device of claim 8, wherein the first data transmission interface is an integrated device electronic (IDE) interface.

16. The digital music conversion device of claim 12, wherein the second data
15 transmission interface is a high-speed data transmission interface.

17. The digital music conversion device of claim 16, wherein the second data transmission interface is a PCMCIA interface.

18. The digital music conversion device of claim 17, wherein the portable recording medium is a PCMCIA memory card.

20 19. The digital music conversion device of claim 8, wherein the second data transmission interface is a universal serial bus (USB) interface.

20. The digital music conversion device of claim 19, wherein the portable memory medium is a flash memory card.